Investigating the Export Competitiveness of Indonesian Automobile in the Middle-East Countries

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Abstrak

Karena mobil merupakan salah satu komoditas Indonesia bernilai tambah dengan potensi ekspor tertinggi, paper ini mengkaji daya saing mobil Indonesia di negara-negara Timur Tengah terpilih dengan menggunakan indeks RSCA, EPD, dan *X-Model*. Indeks RSCA mengungkapkan bahwa mobil Indonesia memiliki keunggulan komparatif di Bahrain, Kuwait, Lebanon, Oman, Qatar, SA, dan UEA. Matriks EPD menunjukkan bahwa Indonesia memiliki posisi *Rising Star* di Bahrain, Kuwait, Lebanon, Oman, dan SA. Hasil *X-Model* menyimpulkan bahwa Bahrain, Kuwait, Lebanon, Oman, dan SA optimistis untuk ekspansi ekspor mobil Indonesia. Indonesia harus fokus pada pengembangan ekspor SUV karena model ini memiliki permintaan tertinggi di negara-negara Timur Tengah. Dengan melonggarkan pajak atas penjualan dalam negeri model ini bisa meningkatkan jumlah produksi yang menciptakan harga yang lebih kompetitif untuk ekspor.

Kata kunci: EPD, Daya Saing Ekspor, Mobil Indonesia, RSCA

Abstract

Since the automobile is one of Indonesia's value-added commodities with the highest export potency, this paper investigates the competitiveness of Indonesian automobile in the selected Middle-east countries by employing the RSCA index, the EPD, and the X-Model. The RSCA indices reveal that the Indonesian automobile has a comparative advantage in Bahrain, Kuwait, Lebanon, Oman, Qatar, SA, and the UAE. The EPD matrix displays that Indonesia has Rising Star positions in Bahrain, Kuwait, Lebanon, Oman, and SA. The X-Model result concludes that Bahrain, Kuwait, Lebanon, Oman, and SA are optimistic for Indonesian automobile export expansion. Indonesia should focus on SUV export development since this model has the highest demand in the Middle-east countries. By relaxing tax on the domestic sales of the model could increase the production number creating more competitive price for export.

Keywords: EPD, Export Competitiveness, Indonesian Automobile, RSCA

1. Introduction

Export is an essential instrument for a country that can boost the Gross Domestic Product (GDP) through foreign exchange revenue. Also, the export market usually defines some new quality standards of export commodities which encourage exporter countries to develop the competitiveness of their export commodities.

Unfortunately, as a country with the largest population and natural resources in the ASEAN, Indonesia's export contribution to GDP is still low where Indonesia is the 8th rank among the ASEAN countries in 2019 (TABLE I). Moreover, Indonesia export is still dominated by raw and intermediate commodities from agriculture and mining sectors such as oil, gas, coal, Crude Palm Oil (CPO), and rubber. Hence, Indonesia requires to improve its manufacturing industries which focus on producing value-added commodities.

TABLE I
ASEAN COUNTRIES' EXPORT CONTRIBUTION TO GDP (%)

Country	2016	2017	2018	2019
Brunei Darussalam	49.58	49.57	51.93	57.95
Cambodia	61.28	60.68	61.60	61.09
Indonesia	19.09	20.18	20.97	18.41
Lao PDR	33.21	N/A	N/A	N/A
Malaysia	66.78	70.01	68.57	65.22
Myanmar	25.94	28.36	30.39	N/A
The Philippines	26.67	29.55	30.21	28.34
Singapore	165.09	170.71	177.68	173.52

Thailand	67.06	66.68	64.87	59.77
Vietnam	93.62	101.59	105.83	106.80

SOURCE: WORLD BANK (2021)

According to the Ministry of Trade Republic of Indonesia, Indonesia's most potential value-added commodity is automobile. This fact is supported by *Gabungan Industri Kendaraan Bermotor Indonesia* (Gaikindo) where the Indonesian automobile industry experiences prosperous growth for the last 15 years in domestic sales and export performance (Figure 1).

Nonetheless, Figure 1 also reveals the wide gap between domestic sales and export. Large domestic demand, importer countries' protective regulations, low capital investment, lack of product differentiation, and/or poor global market connections are pointed out as some possible reasons for the gap (Abedini & Péridy, 2009).

The Ministry of Industry Republic of Indonesia created "Making Indonesia 4.0" program in 2018 to strengthen automobile export. One of this program long-term primary targets is Indonesia must be the automobile export leader in the ASEAN region. Therefore, to support the "Making Indonesia 4.0" program, Indonesia requires a strategy to improve its automobile export performance.
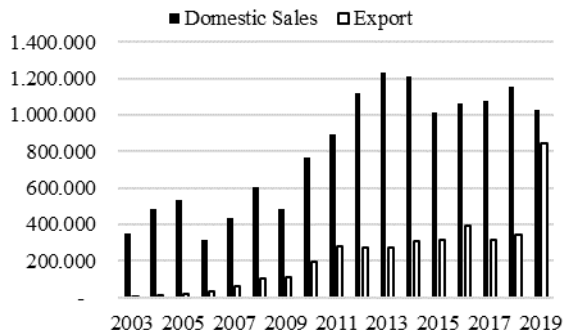

Figure 1: Indonesia Automobile Sales and Export (units) (Gaikindo, 2021)

To arrange an appropriate strategy on automobile export, the export competitiveness of Indonesian automobile must be identified. Thus, an investigation on the export competitiveness of Indonesian automobile is relevant to be examined.

Since previous empirical studies of Indonesia export competitiveness mostly analyze agricultural commodities (Ermawati & Saptia, 2013; Hasibuan et al., 2012; Kaunang, 2013; Nihayah, 2012; Sarwono & Pratama, 2014; Zuhdi & Suharno, 2015), the export competitiveness of Indonesian automobile might not be investigated yet. Only the Organization for Economic Co-operation and Development (OECD) observed the export competitiveness of Indonesian automobile together with four other sectors. However, the OECD did not analyze the export competitiveness

specifically and deeply.

To clarify where Indonesia should expand its automobile export, the trade partners identification is essential in export competitiveness studies. This paper proposes the Middle-east region as one of Indonesia's export target. Despite some Middle-east countries are suffering from civil-war such as Syria and Yemen, most of the Middle-east countries are prospective as export destination countries since they have high GDP per capita and a growing population.

Moreover, previous studies about Indonesia export competitiveness did not discuss specifically the Middle-east countries. Mostly discuss in the global export market (Alexander & Nadapdap, 2019; Asrol & Heriyanto, 2017; Ermawati & Saptia, 2013; Hagi et al., 2012; Hasibuan et al., 2012; Mashari et al., 2019; Nauly et al., 2014; Nihayah, 2012; Pradipta, 2014; Purnamasari et al., 2014; Syahputra et al., 2014; Tupamahu, 2015) and/or in the specific countries (Ashari et al., 2016; Kusuma & Firdaus, 2015; Nurhayati et al., 2018; Pradipta, 2014; Sari et al., 2014; Siburian, 2012; Virginia & Novianti, 2020) which do not imply strategy how to improve export performance in the specific region.

Regarding the background, this paper attempts to investigate the export competitiveness of Indonesian automobile in the Middle-east countries. This paper is conducted as follows. First, this paper provides earlier studies about the Revealed Comparative Advantage (RCA), the Revealed Symmetric Comparative Advantage (RSCA), and the Export Product Dynamics (EPD in the Literature Review section. Second, the dataset and the investigation tools are explained in the Research Method section. Third, the Result and Discussion section describe the finding and the analysis result. And the last, summary and policy recommendations are provided in the Conclusion section.

2. Literature Review

The RCA was introduced firstly by Balassa in 1965 and became popular as a tool to measure export competitiveness. The RCA calculates a country's commodity export relative to the commodity total import of a country, region, or even the world. A country's commodity tends to have high demand in the export market if the commodity has more comparative advantage than that from other countries. Many past studies employ the RCA and combine it with other measurement methods.

Suntharalingam et al. (2011) utilize the RCA and the Comparative Export Performance (CEP). Based on the RCA indices, Malaysian watermelon defeats Thailand, Indonesia, the Philippines, Singapore, China, and India in the world market. While the CEP reveals that

Malaysia has the strongest competitiveness in exporting watermelon and papaya to Singapore and Hong Kong.

Bano & Scrimgeour (2012) applies the RCA and gravity models to investigate the export performance of New Zealand's Kiwifruit. The RCA indices show that New Zealand's Kiwifruit has strong competitiveness in the world market and the gravity models find that importers' GDP, location, and trade agreement have a significant influence on Kiwifruit export performance.

Hasibuan et al. (2012) employ three methods to measure the export performance of cocoa bean and its intermediate commodities, the RCA, the EPD, and the Constant Market Share Analysis (CMSA). The RCA indices shows that the export competitiveness of Indonesian cocoa commodities is far below Ivory Coast and Ghana. Nevertheless, Indonesian cocoa commodities still have a comparative advantage. The EPD informs that almost all cocoa commodities have a competitive advantage while the CMSA shows that the intermediate commodities have a higher competitive advantage than the cocoa bean.

The RCA and the CMSA are also applied by Ermawati & Saptia (2013) to observe the export competitiveness of Indonesian CPO and Palm Kernel Oil (PKO). Based on the RCA indices, the export performance of Indonesian CPO and PKO are lower than those of Malaysia and Thailand. The CMSA analysis finds that Indonesian CPO and PKO tend to decrease in the global market.

Herciu (2013) employs the RCA and Porter's Diamond Model (PDM) on the international competitiveness of Romanian export commodities. The RCA indices reveal that Romania has more competitive disadvantage than a competitive advantage. The PDM suggests that Romania should reduce its production costs, improve the quality of its commodities, expand its export market, and maintain its exchange rate and current account deficit.

The RCA and the PDM are also utilized by Kaunang (2013) in examining the export competitiveness of Indonesian coconut oil. Based on the RCA indices, Indonesian coconut oil has decreased since 2010. The PDM describes that the Government of Indonesia (GoI) should improve the infrastructure in North Sulawesi, subsidize the fertilizer for coconut plant, and develop the technology of the coconut oil industry.

Mushanyuri & Mzumara (2013) only employs the RCA to investigate the export commodities of Mauritius in the Southern African Development Community (SADC), the Common Market for Eastern and Southern Africa (COMESA), and the global markets. The RCA indices reveal that Mauritius has export competitiveness in 529 commodities codes where live primates are the most competitive.

Sarwono & Pratama (2014) uses the RCA to observes the export competitiveness of Indonesian soybean and time-series regression to investigate the determinant factors of the RCA index. Indonesian soybean has weak export competitiveness with the RCA indices lower than one. Based on the time-series regression analysis, soybean production and export are the significant determinant factors of the Indonesian soybean RCA index.

Zuhdi & Suharno (2015) analyzes the export competitiveness of Indonesian and Vietnamese coffee in the ASEAN 5 market by applying the RCA and the EPD. The RCA indices indicate that Vietnam has better export competitiveness than Indonesia. Based on the EPD, the export performance of both countries is growing fast and very dynamic because of the increase of coffee demand in the ASEAN 5 market.

Nevertheless, since the RCA index suffers from its asymmetric index. For this reason, several studies suggest the RSCA and compare between the RCA and the RSCA such as Laursen (2015), Ndubuto et al. (2010), Nihayah (2012), Rossato et al. (2018), and Startienė & Remeikienė (2014). Laursen (2015) proves empirically that the RSCA is the best export competitiveness index among other indices such as the Michaely, the Contribution to Trade Balance, Chi-Square, and Bowen's Net Trade Indices. Moreover, Laursen (2015) also shows how to use RCA and RSCA indices to measure the export competitiveness stability and trend.

From the explanation above, this paper applies the RSCA since it is the most reliable in measuring export competitiveness. Also, since there is no study using the RSCA index in calculating export competitiveness stability and trend yet, this paper utilizes Laursen's (2015) method to analyze the export competitiveness stability and trend of Indonesian automobile export in the Middle-east countries.

3. Research Methods

This paper employs the secondary annual data acquired from UN Comtrade and International Trade Centre (ITC) period 2005-2019. At the outset, this paper explains briefly descriptive statistic about automobile import in the Middle-east region. The export commodity is all automotive commodities which are included in HS code 8703 (Motor cars and other motor vehicles; principally designed for the transport of persons). Next, this paper analyzes the competitiveness level, trend, and stability of Indonesian automobile export in the Middle-east countries.

This paper splits the analysis into three parts: first, this paper investigates the competitiveness level of Indonesian automobile export in selected trade partners

individually during the period by applying the RSCA method. Second, from the RSCA indices, this paper provides the trend and stability of the export competitiveness.

Balassa (1965) proposes the RCA index as follow:

$$RCA_t = \left(\frac{x_{cijt}}{x_{aijt}}\right) \Big/ \left(\frac{m_{cjt}}{m_{ajt}}\right) \qquad (1)$$

where:

RCA_t : the RCA index in year t

x_{cijt} : the export value of c commodity from country i to country j in year t

x_{aijt} : the total export value from country i to country j in year t

m_{cjt} : country j's c commodity total import value in year t

m_{ajt} : country j's total import value in year t

If $RCA_t > 1$ then the exporter country has a comparative advantage of c commodity, otherwise it has a comparative disadvantage.

Since the RCA index suffers from asymmetry problem, Laursen (2015) develops the RSCA with the following formula:

$$RSCA_t = (RCA_t - 1)/(RCA_t + 1) \qquad (2)$$

If $RSCA_t > 0$ then the exporter country has a comparative advantage of c commodity, otherwise it has a comparative disadvantage.

The RSCA index from equation (2) can be used to calculate the competitiveness stability by applying the following regression equation:

$$RSCA_t = \alpha + \beta(RSCA_{t-1}) + \varepsilon_t \qquad (3)$$

α and β are the regression coefficients from equation (3) solution. β represents the competitiveness stability of c commodity. If β far from 1 then the competitiveness highly fluctuates. β/R represents the competitiveness trend of c commodity where R is the correlation coefficients of equation (3). If $\beta/R > 1$ then the competitiveness has an increasing trend, otherwise it has a decreasing trend.

According to Wardani & Mulatsih (2017), the EPD is used to identify the market position dynamics of a commodity in trade partner countries. Esterhuizen (2006) describes that the EPD matrix utilizes market attractiveness as the X-axis and business strength as the Y-axis. Also, the EPD matrix is divided into 4

positions: "Rising Star", "Falling Star", "Lost Opportunity", and "Retreat" (Figure 2). "Rising Star" is the most favorable position where the export commodity could grow rapidly. "Falling star" is an unfavorable position where the export commodity falls when the export market share rises. "Lost Opportunity" is the least favorable position where the export commodity is competitive but the market share of the exporter country decreases. "Retreat" might be an unfavorable position but it might be an input for the exporter country to switch and support other more competitive commodities.
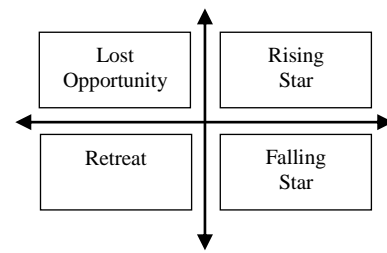

Figure 2: The EPD Matrix

The X-axis is the position of country i's c commodity export share in importer country j which is determined by the following formula:

$$\frac{\sum_{t=1}^{t}\left(\frac{x_{cij}}{m_{cj}}\right)_t \times 100\% - \sum_{t=1}^{t}\left(\frac{x_{cij}}{m_{cj}}\right)_{t-1} \times 100\%}{T} \quad (4)$$

The Y-axis is the position of country i's total export share in importer country j which is determined by the following formula:

$$\frac{\sum_{t=1}^{t}\left(\frac{x_{aij}}{m_{aj}}\right)_t \times 100\% - \sum_{t=1}^{t}\left(\frac{x_{aij}}{m_{aj}}\right)_{t-1} \times 100\%}{T} \quad (5)$$

where T is total observation years.

The RSCA indices and the EPD can be combined to cluster export market expansion and called X-Model Potential Export Products (Nurhayati et al., 2018). The cluster can be determined as follows:
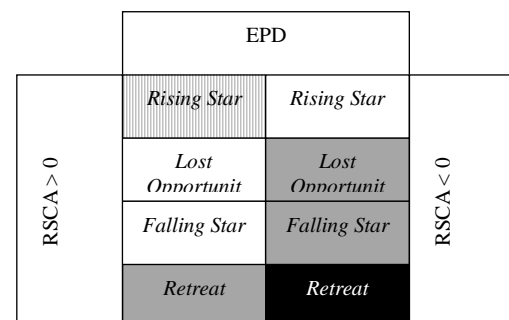

Figure 3: X-Model Potential Export Products Analysis

The description of patterns:

Optimistic Export Expansion	Potential Export Expansion
Less Potential Export Expansion	Non-Potential Export Expansion

4. Result and Discussion

Indonesian automobile demand is prospective in many countries. 80 countries are regular importers of Indonesian automobile. Thanks to Trade Agreements such as Preferential Trade Agreement (PTA), Free Trade Agreement (FTA), or Comprehensive Economic Partnership Agreement (CEPA), Indonesian automobile export have increased. Especially the Middle-east region where the export potency of Indonesian automobile still could grow.

The Middle-east countries are well-known as automobile lovers, low-price fuel, and lack of public transportation which make them the potential market for automobiles. The Middle-east countries choose Indonesian automobile because there is no strict regulation in emission standard and the price of Indonesian automobile is also quite competitive. About 34% of Indonesian automobile are exported to the Middle-east countries. The Middle-east countries which also automobile producers are Iran and Egypt. They also pursue exporting automobile which could be the primary competitors for Indonesia in the Middle-east market.

Although there are conflicts and wars in the Middle-east region such as in Palestine, Syria, and Yemen, they do not influence the automobile export flow to the region significantly. The export market for Indonesian automobile in the conflicted countries is relatively small.

From APPENDIX I, Iran has the highest number of automobile sales while Jordan is the lowest. APPENDIX I also exposes a declining trend of automobile sales in the Middle-east countries since 2016. The automobile demand was drop because of the falling international oil price. Since the Middle-east region is the largest oil supplier in the world, the oil price crisis affected the economy of the region seriously. Indonesian automobile also experienced decreasing export performance during the crisis period.

TABLE II
THE EXPORT COMPETITIVENESS STABILITY & TREND

Country	Stability (β)	Trend (β/R)
Bahrain	0.5090	0.7589
Egypt	0.6100	0.9917

Jordan	0.7483	1.2051
Kuwait	0.7674	0.8458
Lebanon	0.1342	0.8264
Oman	0.2493	0.7254
Qatar	0.6877	1.0285
Saudi Arabia	0.4769	0.7528
The UAE	0.1804	0.7220

SOURCE: AUTHOR'S CALCULATION

Multi-purpose Vehicle (MPV) model is the main products of Indonesian automobile manufacturers, especially the Toyota brand. Famous variants such as Avanza, Innova, Fortuner, Grand Max, Hilux and Terios dominate not only Indonesia's domestic sales but also Indonesia's export. Most of these variants are also exported to the Middle-east countries. From 15 Middle-east countries, only 9 countries who are Indonesia's partners in automobile trade consistently since 2006: Bahrain, Egypt, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia (SA), and the United Arab Emirates (UAE). Based on APPENDIX II, the biggest Indonesian automobile importer is SA while the smallest is Jordan.

Although the export value of Indonesian automobile has an escalating trend before the falling global oil price, it does not mean that the export competitiveness also increases. APPENDIX III reveals that the Indonesian automobile has a comparative advantage in Bahrain, Kuwait, Lebanon, Oman, Qatar, SA, and the UAE with positive average RSCA indices. While Egypt and Jordan show a comparative disadvantage. Based on TABLE II, the export competitiveness stability has a mid-high fluctuation since β is far from 1, particularly in Lebanon and the UAE where β is almost zero. Also, TABLE II shows that the export competitiveness trend increases only in Jordan and Qatar while the others show a decreasing trend.
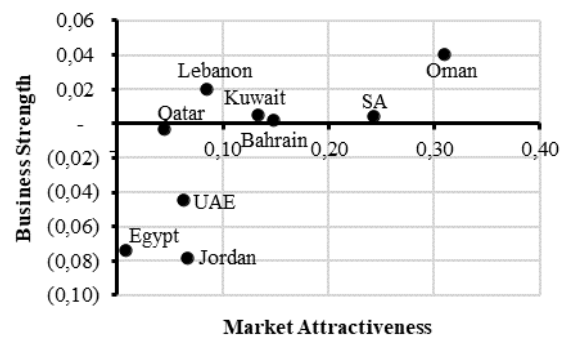

Figure 4: The EPD Matrix of Indonesian Automobile Export in the Selected Middle-East Countries

Figure 4 displays the market positions of Indonesian automobile in the selected Middle-east countries.

Indonesia has Rising Star positions in Bahrain, Kuwait, Lebanon, Oman, and SA. Indonesia's automobile market share rises inline with the increase of its total export share in those countries, while the others show Falling Star positions although the Indonesian automobile shows an improvement in export performance.

TABLE III

THE X-MODEL ANALYSIS RESULT OF INDONESIAN AUTOMOBILE EXPORT IN THE SELECTED MIDDLE-EAST COUNTRIES

Country	Average RSCA	EPD	X-Model
Bahrain	0.5217	Rising Star	Optimistic
Egypt	-0.3870	Falling Star	Less Potential
Jordan	-0.5423	Falling Star	Less Potential
Kuwait	0.2648	Rising Star	Optimistic
Lebanon	0.4123	Rising Star	Optimistic
Oman	0.3823	Rising Star	Optimistic
Qatar	0.3746	Falling Star	Potential
SA	0.4542	Rising Star	Optimistic
The UAE	0.1083	Falling Star	Potential

SOURCE: AUTHOR'S CALCULATION

Based on the TABLE III, Indonesia has optimistic export expansions in Bahrain, Kuwait, Lebanon, Oman, and SA where Indonesia could increase automobile export number and expand the model variants. Although Qatar and the UAE have Falling Star positions, they still have potential for export expansion. Meanwhile, Indonesia could surrender in Egypt and Jordan since they are less potential.

From the X-Model, Indonesia should treat countries with optimistic and potential export expansion result as potential trade partners and develop a mutual relationship. However, Indonesia require specific bilateral approaches and export strategies to gain more market share in the less potential Middle-East countries. The Middle-east countries are still dominated by giant automobile producer countries such as Japan, Germany, the USA, and the Republic of Korea. These are proofs that geographical distance is not relevant anymore but brand image and marketing strategy play the role more. The main issue in the Indonesian automobile industry is model differentiation. Indonesia automobile production is mostly the MPV model because this model is the most favorite model for Indonesian customers. On the other hand, the Sport Utility Vehicle (SUV) has the highest sales in the Middle-east countries.

Since the SUV taxed higher than the MPV in Indonesia's domestic market, the MPV became the most demanded model. For this reason, the local automobile manufacturers also produce the MPV for the export market to achieve lower average production costs. As a result, the price of MPV is more competitive in both markets. According to Director General of Metal, Machinery, Transportation Equipment, and Electronics Industry (ILMATE), Indonesia requires to enact tax relaxation on the SUV, so the domestic demand on the SUV could rise and simultaneously stimulate the production for the export market (Gaikindo, 2019). The primary strength of the Indonesian automobile industry is the domestic market. Therefore, no local manufacturers would produce models which are not attractive to the domestic market. The automobile producers are afraid of profit loss if they rely on the export market only.

5. Conclusions

The export competitiveness of Indonesian automobile still has the potency to grow in the Middle-east countries although some countries are suffering from wars. 34% of Indonesian automobile export in the world are absorbed by the Middle-east countries.

The RSCA indices from the selected Middle-east countries reveal that the Indonesian automobile has a comparative advantage in Bahrain, Kuwait, Lebanon, Oman, Qatar, SA, and the UAE while Egypt and Jordan show a comparative disadvantage. The export competitiveness stability has medium to extreme fluctuations, particularly in Lebanon and the UAE. The export competitiveness shows an increasing trend only in Jordan and Qatar while the other countries show a decreasing trend.

The EPD matrix displays that Indonesia has Rising Star positions in Bahrain, Kuwait, Lebanon, Oman, and SA. While Falling Star positions are shown in Egypt, Jordan, Qatar, and the UAE.

Meanwhile, the X-Model result concludes that Bahrain, Kuwait, Lebanon, Oman, and SA are optimistic for Indonesian automobile export expansion. Qatar and the UAE are potential for the expansion. Therefore, Indonesia should manage special bilateral approaches with those optimistic and potential countries.

Indonesia should focus on SUV export development since this model has the highest demand in the Middle-east countries. The appropriate strategy for Indonesian automobile export expansion is increasing the SUV production number by relaxing the tax on the SUV in the domestic market.

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Appendix

APPENDIX I

Automobile Domestic Sales in Middle-East Countries (Units)

Year	Bahrain	Egypt	Iran	Iraq	Israel	Jordan	Kuwait	Lebanon	Oman	Qatar	SA	The UAE
2005	20,000	121,437	857,500	30,700	156,000	20,000	80,000	16,000	207,100	84,500	562,900	157,000
2006	23,000	170,614	971,000	32,200	156,000	15,100	84,000	16,000	204,600	83,400	556,100	175,000
2007	25,000	206,060	1,037,900	35,000	220,000	14,700	90,000	21,000	203,900	83,100	554,400	165,000
2008	36,000	239,833	1,190,000	62,000	192,000	18,000	99,500	34,000	198,500	81,000	540,000	233,592
2009	38,000	205,521	1,320,000	63,000	174,500	21,000	108,500	34,500	155,500	55,000	520,000	205,088
2010	35,000	248,917	1,642,843	165,000	217,000	20,000	110,000	35,500	178,000	55,500	600,000	168,323
2011	31,000	271,900	1,688,194	131,500	227,000	22,000	114,500	33,500	169,500	61,000	590,000	243,982
2012	47,000	286,300	1,044,430	120,000	206,500	23,000	140,000	37,500	204,500	80,000	705,000	268,900
2013	53,000	283,000	804,750	117,500	215,500	29,000	151,500	37,500	215,000	85,000	740,000	263,100
2014	61,100	349,100	1,287,600	87,700	242,400	23,800	152,300	40,300	208,400	92,900	828,200	263,100
2015	58,300	332,100	1,222,000	49,200	260,200	22,800	143,800	40,700	167,600	86,400	830,100	256,700
2016	46,300	264,100	1,448,500	24,800	292,700	20,500	108,000	37,800	154,900	63,700	655,500	198,500
2017	36,037	128,941	1,429,172	33,553	286,472	20,614	101,523	39,881	77,270	50,686	500,601	12,800
2018	35,962	184,456	959,628	53,528	271,497	21,236	103,235	35,301	63,598	47,508	403,857	13,900
2019	30,200	170,000	655,515	76,700	258,622	22,000	113,000	23,383	63,500	47,550	528,883	263,000

Source: Organisation Internationale des Constructeurs d'Automobiles (OICA)

Note: There are data limitation for Palestine, Syria, and Yemen due to domestic conflict. Hence, they are not included on this table

APPENDIX II

INDONESIAN AUTOMOBILE EXPORT TO SELECTED MIDDLE-EAST COUNTRIES (US$)

Year	Bahrain	Egypt	Jordan	Kuwait	Lebanon	Oman	Qatar	SA	The UAE	Total
2006	1,261,802	1,947,675	168,163	4,838,019	1,448,979	3,914,647	3,233,101	75,490,864	16,901,752	109,205,002
2007	5,554,063	9,508,143	966,304	14,021,722	10,634,517	48,409,081	9,463,771	196,332,778	111,038,175	405,928,554
2008	8,365,469	23,861,923	1,511,769	12,074,003	17,151,538	70,297,146	7,183,681	268,083,615	110,525,496	519,054,640
2009	2,711,516	18,148,040	421,365	9,400,497	9,593,730	16,279,850	3,898,776	115,852,518	28,053,031	204,359,323
2010	3,571,331	7,057,156	630,167	17,110,231	6,920,086	19,843,919	5,217,485	233,188,555	47,354,421	340,893,351
2011	4,425,803	14,333,559	1,097,830	24,847,441	4,628,147	48,918,783	9,673,889	317,164,778	84,770,959	509,861,189
2012	7,191,020	15,860,676	2,226,056	35,765,775	13,668,509	75,505,565	16,564,690	528,622,102	120,956,718	816,361,111
2013	13,272,942	12,824,492	798,753	48,092,541	11,498,632	63,051,854	23,981,518	528,628,659	162,311,971	864,461,362
2014	29,627,589	11,082,702	2,629,700	58,657,417	16,389,402	91,065,445	36,009,946	684,153,171	189,052,036	1,118,667,408
2015	26,610,850	7,912,633	2,337,839	58,763,981	20,196,759	44,576,555	26,125,341	873,466,698	204,912,113	1,264,902,769
2016	18,149,107	951,499	1,691,301	51,146,897	12,348,668	36,455,081	14,077,474	447,869,767	69,710,168	652,399,962
2017	23,566,857	160,499	1,689,817	31,359,420	14,406,734	92,110,052	16,571,640	494,133,463	126,038,518	800,037,000
2018	21,130,931	11,173,435	7,312,998	41,815,074	19,207,473	149,681,253	19,185,080	373,446,050	137,856,789	780,809,083
2019	19,321,968	17,878,645	7,541,255	63,426,299	10,562,897	140,778,926	30,671,024	455,034,707	158,828,817	904,044,538

SOURCE: UN COMTRADE (2021)

APPENDIX III

RSCA INDICES OF INDONESIAN AUTOMOBILE IN SELECTED MIDDLE-EAST COUNTRIES

Year	Bahrain	Egypt	Jordan	Kuwait	Lebanon	Oman	Qatar	SA	The UAE
2006	-0.10250	-0.58307	-0.96131	-0.38011	0.05508	-0.31110	0.56579	0.00933	-0.53862
2007	0.44935	0.04602	-0.67894	-0.05994	0.59488	0.50826	-0.02224	0.40360	0.19014
2008	0.38170	0.26781	-0.82313	-0.18150	0.50388	0.46998	0.05722	0.42543	0.03104
2009	0.27830	0.15453	-0.89888	-0.12660	0.22618	0.12650	0.05214	0.15146	-0.17679
2010	0.20718	-0.52046	-0.83618	0.19911	0.19725	0.01431	-0.01757	0.32123	-0.09922
2011	0.53526	-0.29654	-0.65483	0.30315	0.14231	0.32923	0.29621	0.43258	0.14840
2012	0.42503	-0.13279	-0.38186	0.31442	0.55201	0.42061	0.24790	0.47597	0.21536
2013	0.66408	-0.24005	-0.74330	0.42034	0.46740	0.45370	0.45680	0.51088	0.42188
2014	0.75699	-0.62521	-0.42687	0.47214	0.61298	0.48265	0.63751	0.53764	0.24338
2015	0.68193	-0.74097	-0.35222	0.49179	0.56915	0.38794	0.49504	0.61338	0.37856
2016	0.67404	-0.95746	-0.54474	0.64036	0.41894	0.46782	0.54979	0.56682	0.00047
2017	0.80118	-0.98991	-0.63439	0.50408	0.44147	0.54664	0.61224	0.66515	0.12036
2018	0.80357	-0.50514	0.11276	0.56893	0.52733	0.81463	0.65412	0.64548	0.19850
2019	0.74711	-0.29430	0.23114	0.54061	0.46378	0.64092	0.65879	0.59986	0.38243
Average	0.52166	-0.38697	-0.54234	0.26477	0.41233	0.38229	0.37455	0.45420	0.10828

SOURCE: AUTHOR'S CALCULATION